

receiving in the memory second data representing a second video frame, the second data comprising a plurality of elements relating to a group of pixels;

generating third data representing at least one video frame based upon information from the first and/or second data, the third data comprising a plurality of elements; and

filtering at least a portion of the generated third data, wherein the strength of the filtering applied is different for pixels near perimeter of the group of pixels than those pixels near the center of the group of pixels.

7. (Twice Amended) The method of Claim 2, further comprising:

wherein the filter strength identifies the number of pixels from the edge of the macroblocks that are to be filtered; and

selectively filtering pixels in each of the macroblock quadrants based upon the filter strength.

16. 9. (Twice Amended) A system for generating video frames, the system comprising:

means for receiving first video frame data in a memory in a computer system, the first video frame data comprising a plurality of elements, each element corresponding to a group of pixels, the first video frame data representing a first video frame;

means for receiving second video frame data in the memory in the computer system, the second video frame data comprising a plurality of elements, each element corresponding to a group of pixels, the second video frame data representing a second video frame;

means for generating at least one intermediate video frame based upon information from the first video frame data and/or the second video frame data, the third video frame data comprising a plurality of elements, the at least one intermediate video frame representing at least one selected element at a position intermediate to respective positions whereat the element is represented by the first video frame and the second video frame;

means for determining a filter strength, wherein the filter strength relates to the amount of smoothing performed by a filter; and

filter means for reducing visible discontinuity between at least two adjacent elements in the at least one generated intermediate video frame.

18. 15. (Amended) The system of Claim 17, further comprising:

wherein the filter strength relates to the number of pixels from the edge of the macroblock quadrants; and

B4 means for selectively filtering pixels in the macroblock quadrants based upon the filter strength.

~~26~~ 17. (Twice Amended) A video presentation, comprising:

first frame data in a memory in a computer system, the first frame data representing a first video frame, the first frame data comprising a plurality of elements, each element corresponding to a group of pixels;

second frame data in the memory in the computer system, the second frame data representing a second video frame, the second frame data comprising a plurality of elements, each element corresponding to a group of pixels; and

B5 intermediate frame data representing an intermediate video frame between the first and second video frames, the intermediate frame data based upon information from the first and second frame data, the second frame data comprising a plurality of elements, the intermediate video frame representing at least one selected element at a position intermediate to respective positions whereat the selected element is represented by the first video frame and the second video frame, and wherein at least a portion of the intermediate video frame has been filtered in accordance with a determined filter strength so as to reduce visible discontinuities between elements.

~~38~~ 24. (Twice Amended) A program storage device, storing instructions which, when executed, perform the method comprising:

B6 receiving first data representing a first video frame, the first data comprising a plurality of elements in a memory in the computer system, each element relating to a group of pixels, the first data representing a first element at a first position in the first video frame;

receiving second data representing a second video frame, the second data comprising a plurality of elements in the memory in the computer system, each element relating to a group of pixels, the second data representing the first element at a second position in the second video frame;

generating third data representing an intermediate video frame based upon information from the first and/or second data, the third data representing the first element at a position intermediate to the first and second positions;

B6 determining a filter strength, wherein the filter strength identifies the amount of smoothing performed by a filter; and

filtering with the filter at least a portion of the intermediate video frame by reducing visible discontinuity between the first element and an adjoining element.

44. ~~30.~~ (Twice Amended) The program storage device of Claim <sup>31</sup>~~25~~, additionally comprising instructions that when executed perform:

B7 wherein the filter strength identifies the number of pixels from the edge of the macroblock quadrants; and

selectively filtering pixels in the macroblock quadrants based upon the filter strength.

56. ~~36.~~ (Twice Amended) A system for generating video frames, the system comprising:  
a frame analysis module configured to receive frames; and

B8 a frame synthesis module configured to generate at least one frame between two received frames, the frame synthesis module determining a filter strength, wherein the filter strength is related to the amount of smoothing performed by a filter; the frame synthesis module filtering with the filter the generated frames thereby reducing visible discontinuities in at least region in the generated frame including adjoining elements that includes visible discontinuities.

60. ~~37.~~ (Amended) A system for generating video frames, the system comprising:  
a frame analysis module configured to receive frames; and

B9 a frame synthesis module configured to generate at least one frame between two received frames, the frame synthesis module determining a filter strength, and the frame synthesis module filtering the generated frames based upon the determined filter strength.

B10 62. ~~41.~~ (Amended) The method of Claim 1, wherein the filter strength identifies a particular filter from a plurality of filter choices each having different filter characteristics.

B11 25. ~~43.~~ (Amended) The system of Claim <sup>16</sup>~~8~~, wherein the filter strength identifies a particular filter from a plurality of filter choices each having different filter characteristics.

B12 37. ~~48.~~ (Amended) The system of Claim <sup>35</sup>~~23~~, wherein the filter strength identifies a particular filter from a plurality of filter choices each having different filter characteristics.

<sup>47.</sup>~~51.~~ (Amended) The method of Claim <sup>38</sup>~~24~~, wherein the filter strength identifies a particular filter from a plurality of filter choices each having different filter characteristics.

Please add Claims 55-73 as follows:

<sup>69.</sup>~~55.~~ In a computer system having a memory, a method of generating video frames comprising:

receiving, via a network, in the memory first data representing a first video frame, the first data comprising a plurality of elements relating to a group of pixels;

receiving, via a network, in the memory second data representing a second video frame, the second data comprising a plurality of elements relating to a group of pixels;

decoding the first video frame and second video frame;

subsequent to decoding, generating third data representing at least one video frame based upon information from the first and/or second data, the third data comprising a plurality of elements having visible discontinuity between adjacent elements; and

filtering at least a portion of the generated third data by reducing visible discontinuity between adjacent elements in the generated third data.

<sup>33.</sup>~~56.~~ The method of Claim 52, wherein the elements are macroblock quadrants having a plurality of rows and columns of pixels, each of the pixels having an associated intensity value.

<sup>54.</sup>~~57.~~ The method of Claim 52, wherein the filtering comprises the steps of:

(i) selecting at least one pixel within a selected macroblock quadrant;

(ii) determining the average of the pixel intensity of one or more proximately positioned pixels with respect to the at least one pixel; and

(iii) associating the determined average pixel intensity with the at least one pixel.

<sup>66.</sup>~~58.~~ The method of Claim <sup>65</sup>~~54~~, additionally comprising the step of performing the steps (i), (ii), and (iii) with respect to each of the pixels within the selected macroblock quadrant except the bottom-most row of pixels and the right-most column of pixels.

<sup>67.</sup>~~59.~~ The method of Claim <sup>65</sup>~~54~~, wherein the proximately positioned pixels include two bordering pixels, the first bordering pixel being positioned above the at least one pixel, the second bordering pixel being positioned below the at least one pixel.

~~68.~~<sup>68</sup> The method of Claim ~~54~~<sup>65</sup>, wherein the proximately positioned pixels include two bordering pixels, the first bordering pixel being positioned to the right of the at least one pixel, the second bordering pixel being positioned to the left of the at least one pixel.

~~61.~~<sup>55</sup> The method of Claim ~~52~~<sup>52</sup>, further comprising:  
wherein the filter strength identifies the number of pixels from the edge of the macroblocks that are to be filtered; and

selectively filtering pixels in each of the macroblock quadrants based upon the filter strength.

~~62.~~<sup>61</sup> The system of Claim ~~37~~<sup>60</sup>, wherein the frame synthesis module:  
(i) selects at least one pixel within a selected macroblock quadrant;  
(ii) determines the average of the pixel intensity of one or more proximately positioned pixels with respect to the at least one pixel; and

(iii) associates the determined average pixel intensity with the at least one pixel.

~~63.~~<sup>13</sup> The method of Claim 1, wherein the filtering is based upon the differences in motion vectors of adjacent groups.

~~64.~~<sup>14</sup> The method of Claim 1, wherein as part of filtering the number of pixels from the edge of the macroblocks that are to be filtered is determined.

~~65.~~<sup>9</sup> The method of Claim 7, wherein the filtering is based upon the differences in motion vectors of adjacent groups.

~~66.~~<sup>10</sup> The method of Claim 7, wherein the strength of the filtering is based upon comparing the motion vector to a threshold.

~~67.~~<sup>33</sup> The video presentation of Claim ~~17~~<sup>26</sup>, wherein the filter strength is based upon the differences of motion vectors of adjacent groups.

~~68.~~<sup>34</sup> The video presentation of Claim ~~17~~<sup>26</sup>, wherein the filter strength relates to the number of pixels from the edge of the macroblocks that are to be filtered.

~~69.~~<sup>58</sup> The system of Claim ~~36~~<sup>56</sup>, wherein the filter strength is based upon the differences of motion vectors of adjacent groups.

~~70.~~<sup>59</sup> The system of Claim ~~36~~<sup>56</sup>, wherein the filter strength relates to the number of pixels from the edge of the macroblocks that are to be filtered.